



REPORT

OF THE

CITY OF GLASGOW

Fever and Smallpox Hospitals,
BELVIDERE,

FOR THE

Year ending 31st May, 1906.

BY

JOHN BROWNLEE, M.A., M.D., D.Sc.(Glasg.), D.P H.(Camb.),
PHYSICIAN-SUPERINTENDENT.

*Submitted to the Committee on Health, 24th October, 1906,
and ordered to be printed.*

GLASGOW :
PRINTED BY ROBERT ANDERSON, 142 WEST NILE STREET.
1907.

With Dr. Brownlee's Compliments.

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TO THE CHAIRMAN AND MEMBERS
OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to submit the Report of the City of Glasgow Fever and Smallpox Hospitals, Belvidere, for the year ending 31st May, 1906. On that day there were 318 patients in hospital. During the year 2,550 patients were admitted; and of these 290 died, giving a mortality of 11·3 per cent. We again note the continued decline in the number of cases of Scarlet Fever and Enteric Fever. For the last four years the admissions from Scarlet Fever have been respectively 865, 525, 447, and in the year just finished 368 cases; with Enteric Fever the corresponding numbers are 338, 305, 221, and 138 in the last year. We are, with regard to these two diseases, very markedly in the inter-epidemic period. The mortality figures from these diseases have altered little from last year. The number of cases of Measles has been 962, and the epidemic has been of much the same severity as the preceding year. The number of cases of Whooping-cough has been very small, but among those admitted the disease has been specially severe, a very large number suffering from Broncho-pneumonia as well, and the mortality 20·2 per cent., the highest during the last three years. With regard to Diphtheria more falls to be said. The type has been quite different from that recently experienced. The total number of cases has been larger than any previous year, but the percentage of laryngeal cases, commonly the severest, has been very much lower, being only 24 per cent. as against 40 per cent. in the two previous years, and the number of tracheotomies correspondingly low in proportion, and yet the mortality from the disease has been higher than in the two preceding years, amounting to nearly 17 per cent. This was

only in part due to the admission of moribund cases, but chiefly to profound poisoning caused by the disease, a poisoning which was much less susceptible to treatment by serum than we have been accustomed to see. The number of cases of Paralysis following diphtheria has been very large, the total number of cases occurring in this year, 33, being equal to that occurring in the four previous years together. The cases were, in addition, of a severity without parallel since the introduction of serum treatment in 1895. The causes of these changes in the type of disease is little understood, but they have been long recognised. The other diseases admitted into the hospital have included five cases of Cerebro-spinal Meningitis, of whom three died, and three cases of Smallpox, all occurring in vaccinated persons, all of whom recovered. The average number of patients in hospital has been 318.

The usual courses of lectures were given to students, and were attended by 49, and, as is the rule, three courses of lectures were delivered to the nurses—one for each year of probation—and, on examination, 30 nurses were granted the Hospital Certificate.

I have the honour to be,

GENTLEMEN,

Your obedient Servant,

JOHN BROWNLEE.

RETIRAL OF THE MATRON, MRS. SINCLAIR.

During the year the most notable event in the history of the Hospital has been the retiral of Mrs. Sinclair.

Mrs. Sinclair has been longer associated with Belvidere than any other person. When she first assumed her duties as Matron, in 1875, nursing was of a very different character from what it is now. Mrs. Gamp had not yet been dethroned. If a person became a nurse in a fever hospital then, it might be surmised that she had a past; and, even although the profession were undertaken from sense of interest or duty, yet among her friends she probably occupied a position nearly akin to the skeleton in the cupboard. The most satisfactory recruit in those days was the patient who, having passed through an attack of typhus fever safely and having become accustomed to the atmosphere of a hospital, was induced to stay on and assume the duties of a nurse. Among the so-called nurses sobriety was certainly not the rule, and to find a night nurse lying on the floor intoxicated no infrequent occurrence. There were only two nurses—a day and a night nurse—for each ward, and these fed in the wards, for there was no nurses' dining hall. It was such conditions that Mrs. Sinclair had to meet, and for years she conducted a long uphill fight. Working in conjunction with the Superintendent (Dr. Allan), the number of nurses was increased, their training better arranged, the class successively selected from those of better moral and educational standing, till the old order was swept away and the work of the hospital conducted in a manner and with an effectiveness commensurate to its duties. In this she had, of course, the support of her own assistants and of the medical staff, but through the whole her own abiding purpose was one of the chief, if not the chiefest, factor of the transformation. In such a work moral purpose is as essential as intellectual. Mrs. Sinclair possessed both in a high degree, and, in addition, she never spared her strength in any work which she undertook to do. It is to be hoped that since her retiral she has regained some of her lost strength, and is able to enjoy her well-earned rest.

NOTE ON THE INFLUENCE OF RACE IN DETERMINING THE SUSCEPTIBILITY TO AND THE SEVERITY OF ATTACKS OF SCARLET FEVER, DIPHTHERIA, AND ENTERIC FEVER IN GLASGOW.

THE difference of susceptibility towards infectious disease displayed by different races has been a subject of much enquiry. It is well known that many races of animals are almost immune to certain diseases although their nearest relatives are exceedingly susceptible—the white rat, for instance, being much more immune to anthrax than the brown rat. Actual investigation of these points with relation to man is difficult. The fact that epidemics affect different races in different countries with different degrees of severity can be explained just as easily by a difference in the virulence in the infecting organism as by a difference in the constitution of the population infected; on the other hand, in the case of a mixed population living in the same town under much the same conditions, the difficulty of separating the races of the persons infected is generally difficult. The patients admitted to Belvidere with infectious diseases are chiefly children, the majority of whom are born in Glasgow. Birthplaces thus give little guide to race, nor can names be taken as much more trustworthy. After a consideration of the means which might be adopted for the separation of races, it was decided that the religion of the patients would sort out pretty exactly the population of Jewish extraction, and approximately the Irish Celtic population. The justification that this method affords a comparison among races living under the same conditions in Glasgow, and also that it sorts out with some degree of exactness the different races, is as follows:—Of the Jews the great bulk were born in Glasgow, and a few in other cities of Great Britain, amounting together to 80 per cent. of the total, while the remaining 20 per cent. were immigrants from Russia or Poland. The cases may thus be taken as fairly representative of what the Jewish population living in Glasgow probably consists. The Roman Catholics in Glasgow, as seen in the hospital, have equally clearly derived from the Irish

Celtic population. Out of the 108 consecutive Catholic patients, 76 had names of definitely Irish character, while of the remaining 32, with names not necessarily distinctive, 4 were born in Ireland, so that in all 80 out of 108, or 75 per cent., could be considered to be of Irish extraction. This is a sufficiently large proportion to exercise a determining force, so that any peculiarities which the Irish inhabitants may display towards infectious disease may be made evident. In addition, about 90 per cent. of these were born in Glasgow, so that here again the conditions under which the patients lived may be considered typically those obtaining in the city.

The remaining inhabitants of the city are classed as Protestants. Practically nothing can be said of these as regards race. They represent the original population of the city and the great heterogeneous mass of immigration into Glasgow, and they afford the general standard which allows of comparison with the population of Glasgow of the races referred to in regard to the frequency and severity of attack by organisms which are all presumably identical.

There are only three diseases in Glasgow of which the great bulk of those infected are removed to hospital—Diphtheria, Scarlet Fever, and Enteric Fever—and these therefore afford statistics which can best be taken as representing the manner in which the same conditions affect different persons. The numbers of cases and deaths in both sexes have been taken out for the last three years and classified according as the information obtained gives the religion of the patient as Protestant, Catholic, or Jewish. A few foreigners have been rejected, and in a small number of cases the religion has not been recorded. The tables appended give the figures thus obtained (pp. 13, 14, 15).

In the first place, the following facts may be noted with regard to the Roman Catholic population, which, as has been shown, is chiefly Irish Celtic. Taking the statistics of Cork Street Hospital, Dublin, as a criterion of what may be considered somewhat characteristic of Ireland, we find the mortality from Enteric Fever for the last twenty-five years has varied from 4 per cent. to 10 per cent. of the admitted cases, as against 12 per cent. to 20 per cent. in Belvidere; that of Scarlet Fever from 3 per cent. to 20 per cent., as against 3 per cent. to 12 per cent. in Belvidere; while that from Diphtheria has been much the same. The differences shown in the two former

diseases are very remarkable when the statistics of Enteric Fever are considered. In Glasgow it is found that the death-rate among the Catholics is also lower than that among the Protestants, being 14.1 per cent. as against 16.4 per cent. This difference is equally apparent when males and females are considered separately, but it is a difference of small amount, nothing in comparison with that seen to exist between the normal fever present in Dublin and Glasgow. It would therefore seem that, with regard to Enteric Fever, difference in the infecting organism is a much more potent factor in determining the severity of the attack than difference of race. With regard to Scarlet Fever, it is to be noted the death-rate among the Catholics has been considerably higher than that among the Protestants. Again a difference in the same direction as that seen between the ordinary cases in Glasgow and Dublin. The difference in this case is of a very considerable degree, and, were the number of persons affected larger and the fact more certain, would warrant the conclusion that in the case of Scarlet Fever race was a very potent factor in determining the severity of the disease. This is in harmony with a previous observation which I made when Medical Officer of Health in Guernsey. Of 120 cases of Scarlet Fever occurring amid the native population not a death occurred, while among the few of British or other extraction who developed the disease the type was much more severe, and the only death which occurred was among the latter. With regard to Diphtheria, the death-roll among the Catholics has been slightly lower than among the Protestants, but, in view of the total number of cases, the difference is insignificant. With regard to the susceptibility to attack, that cannot be determined absolutely, as I have no means of knowing the total Catholic population of Glasgow, but in the annexed table (p. 15) the relative percentages of Protestants, Catholics, and Jews have been calculated, and it can be seen the percentage of Catholic patients suffering from Enteric Fever is fully twice that which is observed in the other two diseases, indicating a considerably greater susceptibility to the disease, though the actual mortality among those who take it is somewhat less, a fact in accordance with the general rule that susceptibility and resistance to fatal attack are usually present in inverse proportions.

With regard to the Jews, various conclusions seem warranted. The total number in Glasgow is small, and probably does not

exceed 7,500 8,000,* a figure which gives about 1 per 100 to the other population of Glasgow. When we examine the tables with regard to Enteric Fever, we find this proportion not exceeded; out of 626 patients admitted during the last three years, only 4 were Jews. With regard to Scarlet Fever and Diphtheria, however, a very different condition is observed—the proportion of admissions amounting to practically 4 per cent. of the whole, a proportion four times greater than that in the general population. With regard to Scarlet Fever, it is true that, in one of the years considered, 38 Jews were admitted, as if a special epidemic were occurring in the district in which they chiefly live; but, even allowing for this, in the other two years, the percentage of cases was about 2 per cent., still considerably in excess of what might be expected, and we are forced to the conclusion that the Jew in Glasgow is more susceptible to these two diseases than the average of the population. It is again to be noted that the death-rate among the Jews has been surprisingly small. Of the four admitted with Enteric Fever none died, though this is what is to be expected, as the four were under ten years of age. Of the fifty-two suffering from Scarlet Fever none died, which perhaps may be explained on the ground of the small death-rate in that disease, but out of twenty-two cases of Diphtheria there was only one death. This was not because the cases were chiefly faucial and not laryngeal, for out of the total of twenty-two, in eight the larynx was affected, a proportion identical with that occurring among the total cases admitted to hospital. Tracheotomy was only required once, and in only one case (the case which died) was there profound diphtheritic poisoning. Nor is the mildness to be explained on the ground of age, as out of the twenty-two cases twenty were under five years of age. The explanation must rather be sought in the racial characteristics. Here again the existence of considerable susceptibility to the disease is associated with high recuperative powers.

With regard to other diseases, the labour of taking out the figures would hardly be repaid, because only a small proportion of the total cases are removed to hospital, except in the case of Smallpox, and at the time of the Smallpox epidemics the religious beliefs of the patients were not systematically recorded. It may,

* For this note I am indebted to Mr. J. Levine, Honorary Secretary, Glasgow Jewish Board of Guardians and Philanthropic Association.

however, he noted that out of the 4,000 patients admitted there was certainly not more than three or four Jews.

The religious beliefs of the cases of Measles have, however, been taken out for a single year, 1905-06. The notable points are the small number of Jews and the large number of Catholics. On neither of these can too much stress be laid. Measles is a disease very largely spread by schools, and the accidental occurrence of Measles in one or more schools belonging to the divisions would account for a great alteration in the relative proportions in which they are admitted. Again, however, in the same epidemics there is a marked diversity in the number of deaths occurring in the Protestant and Catholic groups—a diversity not accounted for by difference of age distribution, and probably to be explained by differences of race. When it is remembered how severely the adult from the Scotch Highlands when attacked by Measles in Glasgow suffers from the disease, though he rarely dies, it is probable that the Celtic child may have a more severe attack.

These remarks must not be given more weight than the figures on which they are based entitle them. The numbers in no case are very large, and, though the conclusions are in general accord with clinical experience, it is possible that a more prolonged record of facts might lead to some modification. In addition, the figures cannot be held as applying definitely to any other town than Glasgow, as it is well known that climatic conditions affect different races in different ways, and that the population of Glasgow, if transferred to some other place, might show a difference of reaction to the same diseases than that just described.

TABLE SHOWING THE CASES AND DEATHS OF SCARLET FEVER
ACCORDING TO AGE AND RELIGION, 1903-1906.

AGE-PERIODS.	PROTESTANTS.				CATHOLICS.				JEWS.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0—1, -	9	...	3	1	1	...	...	...	...	...	...	...
1—2, -	24	1	14	2	2	...	3	1	...	...	1	...
2—3, -	36	4	28	2	4	...	4	1	1	...	5	...
3—4, -	54	5	48	1	12	3	9	1	4	...	6	...
4—5, -	58	4	66	5	5	...	20	1	3	...	4	...
5—6, -	56	3	58	4	11	2	9	...	2	...	3	...
6—7, -	57	1	70	...	7	...	10	2	2	...	4	...
7—8, -	35	...	53	...	5	...	6	..	1	...	1	...
8—10, -	49	...	70	3	6	...	16	...	2	...	4	...
10—15, -	71	...	84	4	9	...	8	...	1	...	5	...
15—20, -	26	1	26	...	2	...	8	1	...	...	...	...
20—30, -	29	1	30	2	3	1	6	...	...	...	1	...
30—40, -	5	...	3	...	1	...	1	...	...	...	...	...
40—50, -	...	...	2	...	1	...	...	...	...	...	...	...
	509	20	555	24	69	6	100	7	16	...	34	...
	3·8		4·3		8·6		7·0					
	4·1				7·6							

TABLE SHOWING THE CASES AND DEATHS OF DIPHTHERIA
ACCORDING TO AGE AND RELIGION, 1903-1906.

AGE-PERIODS.	PROTESTANTS.				CATHOLICS.				JEWS.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0— 1, -	19	12	7	2	7	...	3	1	...	...	2	...
1— 2, -	29	8	29	11	14	2	11	2	2	...	...	...
2— 3, -	37	6	30	6	8	...	4	1	2	...	4	1
3— 4, -	25	3	29	2	4	...	7	1	...	...	5	...
4— 5, -	16	2	32	3	...	...	3	...	1	...	...	...
5—10, -	71	8	76	6	6	2	6	1	3	...	1	...
10—15, -	11	...	16	2	2	1	2	...	...	...	1	...
15—20, -	1	...	12	...	...	...	...	...	...	...	...	...
20—30, -	4	...	17	...	1	...	1	...	...	...	...	...
30— -	3	...	8	...	1	...	3	...	...	...	1	...
	216	39	256	32	43	5	40	6	8	...	14	1
	18'0		12'5		11'6		15'0		...		7'1	
	15'0				13'2				4'5			

TABLE SHOWING CASES AND DEATHS OF ENTERIC FEVER
ACCORDING TO AGE AND RELIGION, 1903-1906.

AGE-PERIODS.	PROTESTANTS.				CATHOLICS.				JEWS.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0—5, -	10	1	11	...	7	...	8	...	...	...	1	...
5—10, -	41	2	33	2	23	...	18	2	2	...	1	...
10—15, -	40	2	35	2	21	2	17	1	...	...	...	...
15—20, -	39	10	23	4	6	...	10	2	...	...	...	...
20—25, -	30	12	24	4	15	4	9	1	...	...	...	...
25—30, -	35	8	21	4	19	6	12	3	...	...	...	...
30—40, -	35	6	24	7	11	4	10	2	...	...	...	...
40—50, -	13	3	10	...	2	1	2	...	...	...	...	...
50— -	9	3	5	2	...	...	...	...	...	...	...	...
	252	47	186	25	104	17	86	11	2	...	2	...
	18·6		13·4		16·3		12·8					
	16·4				14·7							

TABLE SHOWING THE PERCENTAGES OF PROTESTANTS, CATHOLICS,
AND JEWS AMONG THE CASES OF ENTERIC FEVER, SCARLET
FEVER, AND DIPHTHERIA ADMITTED TO BELVIDERE,
1903-1906.

	CASES.			PERCENTAGES.		
	Protests.	Caths.	Jews.	Protests.	Caths.	Jews.
Enteric Fever,	438	190	4	69·3	30·0	·6
Scarlet Fever,	1,064	169	50	82·9	13·1	3·8
Diphtheria, -	472	83	22	81·8	14·3	3·8

NOTE ON THE ODOUR IN TYPHUS FEVER.

THE odour in Typhus Fever has been referred to by practically all the chief observers of the disease. The note upon the odour by Murchison contains a synopsis of his own observations and of the observations of previous writers, and as representing different ways in which the odour has impressed different writers is worthy of being quoted in full :—

“*Odour from Skin (Typhus-Odour).*—A peculiar repulsive odour is given off from the body of most typhus patients after the first week. This smell was noted three centuries ago by Salius Diversus, and has been alluded to by almost every subsequent writer. Lind compared it to the ‘odour of rotten straw,’ or to ‘the disagreeable affecting scent from a person labouring under confluent smallpox.’ Gerhard spoke of it as ‘pungent, ammoniacal, and offensive.’ Barrallier likened it to the odour of rotten straw, or to that given off by deer, or by certain reptiles, or by rubbing the leaves of rue between the fingers. By other observers it has been more aptly compared to the smell of mice, but perhaps it is more correct to speak of it as *sui generis*. It must not be confounded with the smell resulting from the urine been passed in bed, or with the putrid odour which sometimes precedes death from many diseases. The nurses in the London Fever Hospital are quite familiar with the typhus-odour, and I have known them distinguish typhus by it alone. The odour is always strongest in damp weather and when the ventilation is bad. As already stated, there is reason for believing that the typhus-poison is associated with this odoriferous substance.”

With the exception of the last sentence, which I think is very unlikely to be true, the description is complete. Many of our nurses are quite familiar with the smell, and, like the London nurses referred to by Dr. Murchison, use it as a diagnostic sign. The description of the odour is very difficult : it does not impress me as being a mousey odour, but, for a reason presently to be explained, that description must have a solid basis of truth. It rather to me suggests an exaggeration of human odour as given off by a dry as distinct from a moist skin. With some people a metallic taste in the mouth, and, with some slight headache, is experienced if the air around a typhus patient has been inhaled for a few minutes. It is not present in every case of typhus, but I have only once perceived it characteristically present in an undoubted case of enteric fever ; in fact, its presence is to me almost an absolute pathognomonic sign.

The reason of this note, however, relates to a peculiar confirmation of the accuracy of the description which compares the odour in typhus fever to that of mice. It has been the habit in this hospital, as in many others, to have a card at the head of each patient's bed containing the particulars about each patient. These cards on dismissal or death are completed, and from them the Annual Report of the Hospital is afterwards made out. The cards are thereafter tied together in bundles and stored. These cards, being in the wards for periods of three weeks and upwards, must, to a certain extent, acquire the odour of the disease. Some years ago when laid up with scarlatina I went over the statistics of typhus fever so as to obtain fuller details than had hitherto been published. Many of these cards I noticed were mouse-eaten, but that did not strike me as peculiar, as they had been stored for many years in a large cupboard. When the cards were being replaced by the House Steward, Mr. Muir, however, he noticed that practically the only ones which were mice-eaten were those belonging to the typhus patients, although all the rest of the cards were equally exposed to their depredations. Mr. Muir had no knowledge when he made the observation that patients suffering from typhus fever had a mousey smell, so that the observation had the merit of independence, and is consequently more valuable. It is further, I think, worthy of record as adding a piece of evidence in favour of the common description.

STATISTICAL TABLES.

TABLE I.

GENERAL STATEMENT.

REMAINING in Hospital, 1st June, 1905,	-	384
ADMITTED during 1905-1906,	- - - - -	2,550
		<hr/>
		2,934
DISMISSED—		
Cured, Relieved, and Died,	- - - - -	2,610
REMAINING in Hospital, 31st May, 1906,	- - -	324
Total Number of Deaths,	-	290
Gross Mortality,	- - -	11.3 per cent.
DAILY average number of patients in Hospital,	- -	318
Average period of stay in Hospital,	- - -	45.4 days

TABLE II.

TABLE SHOWING THE MONTHLY DISTRIBUTION OF THE PRINCIPAL DISEASES FOR THE YEAR 1905-1906.

	Scarlet Fever.		Diphtheria.		Enteric Fever.		Typhus Fever.		Measles.		Whooping-cough.		Erysipelas.		Total Admissions to Fever Hospital.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1905.																
June, - - -	23	2	11	2	6	...	5	...	129	11	22	6	6	1	223	28
July, - - -	14	...	5	...	5	1	7	1	71	4	12	3	6	1	127	12
August, - -	35	4	15	5	22	8	11	3	50	9	14	3	10	1	177	36
September, - -	38	4	17	3	21	1	2	1	42	3	10	1	9	...	170	17
October, - - -	45	2	24	5	30	5	1	1	61	4	9	1	19	5	207	25
November, - -	56	1	19	2	15	2	...	...	101	12	4	1	15	..	231	21
December, - -	26	3	34	7	13	1	7	2	72	5	2	...	11	2	189	23
1906.																
January, - - -	31	1	35	3	4	1	...	...	143	14	9	3	18	...	263	26
February, - -	30	...	34	5	12	4	2	1	68	2	4	1	14	...	192	19
March, - - -	18	...	40	8	4	...	...	...	87	6	16	4	13	3	193	23
April, - - -	25	...	25	6	4	2	3	...	80	7	14	4	12	1	201	25
May, - - -	27	...	30	3	2	1	...	...	58	9	23	3	15	2	188	24
Totals, - - -	368	17	289	49	138	26	38	9	962	86	139	30	148	16	2,361	279

TABLE III.
ENTERIC FEVER.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—5	5	...	6	...	11	...	...
5—10	15	2	15	1	30	3	10·0
10—15	17	...	10	1	27	1	3·7
15—20	7	3	5	2	12	5	41·6
20—25	8	4	10	2	18	6	33·3
25—30	12	2	5	2	17	4	23·5
30—35	6	2	4	2	10	4	40·0
35—40	5	1	3	1	8	2	25·0
40—45	...	..	3	...	3	...	...
45—50	...	...	...	...	...	...	...
50—55	1	1	...	...	1	1	100·0
55—60	...	...	...	..	...	...	...
60—65	...	...	1	..	1	...	...
Totals,	76	15	62	11	138	26	18·8

TABLE IV..

TYPHUS FEVER.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—5	...	...	I	...	I	...	...
5—10	3	...	I	...	4	...	...
10—15	3	...	5	...	8	...	...
15—20	3	...	...	...	3	...	...
20—25	I	...	2	I	3	I	33'3
25—30	2	...	4	...	6	...	...
30—35	...	...	...	...	...	...	...
35—40	I	I	3	I	4	2	50'0
40—45	...	...	...	...	...	...	...
45—50	2	2	5	2	7	4	57'1
50—55	...	...	I	I	I	I	100'0
55—60	I	I	...	...	I	I	100'0
Totals,	16	4	22	5	38	9	23'6

TABLE V.
DIPH'THERIA.

Age-Periods.	TOTAL CASES.				FAUCIAL CASES.			
	Males.		Females.		Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0— 1	10	4	3	2	7	2	3	2
1— 2	22	6	21	6	13	4	5	2
2— 3	21	4	17	6	13	2	6	2
3— 4	15	3	20	1	10	2	14	1
4— 5	9	2	14	2	9	2	12	2
5—10	43	7	48	4	36	6	45	4*
10—15	6	1	13	1	6	1	13	1
15—20	1	...	4	...	1	...	4	...
20—30	2	...	13	...	2	...	13	...
30—40	3	...	3	...	3	...	3	...
40—50	...	...	1	...	...	...	1	...
Totals, - -	132	27	157	22	100	19	119	14
Mortality percent.	20·4		14·0		19·0		11·7	

Age-Periods.	LARYNGEAL CASES.				TRACHEOTOMIES.			
	Males.		Females.		Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
0— 1	3	2	...	...	1	1†	...	...
1— 2	9	2	16	4	2	1	8	3‡
2— 3	8	2	11	4	5	2	5	3
3— 4	5	1	6	...	2	1	1	...
4— 5	...	...	2	...	...	...	...	...
5—10	7	1	3	...	1	...	1	...
10—15	...	...	...	...	...	...	...	...
15—20	...	...	...	...	...	...	...	...
20—30	...	...	...	...	...	...	...	...
30—40	...	...	...	...	...	...	...	...
40—50	...	...	...	...	...	...	...	...
Totals, - -	32	8	38	8	11	5	15	6
Mortality percent.	25·0		21·0		45·4		40·0	

Seventeen patients died within 24 hours of admission.

* 1 Death from Measles. † Miliary Tubercle. ‡ 1 Death from Measles.

TABLE VI.
SCARLET FEVER.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—1	4	...	1	1	5	1	20.0
1—2	8	2	8	1	16	3	18.7
2—3	15	2	13	...	28	2	7.1
3—4	26	3	18	1	44	4	9.0
4—5	20	1	23	1	43	2	4.6
5—6	18	3	29	1	47	4	8.5
6—7	18	...	16	1	34	1	2.8
7—8	16	...	18	...	34	...	...
8—9	8	...	14	...	22	...	...
9—10	8	...	9	...	17	...	...
10—15	23	...	18	...	41	...	...
15—20	8	...	4	...	12	...	...
20—25	8	...	9	...	17	...	...
25—30	2	...	3	...	5	...	...
30—35	1	...	...	...	1	...	...
35—40	...	...	...	...	...	...	...
40—45	...	...	1	...	1	...	...
45—50	1	...	...	...	1	...	...
Totals,	184	11	184	6	368	17	4.6

One patient died within 24 hours of admission.

TABLE VII.

MEASLES.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—1	31	9	31	12	62	21	33·8
1—2	62	8	64	16	126	24	19·0
2—3	77	13	76	12	153	25	16·3
3—4	85	2	68	6	153	8	5·2
4—5	68	2	76	3	144	5	3·4
5—6	57	2	52	1	109	3	2·7
6—7	48	...	41	...	89	...	...
7—8	19	...	25	...	44	...	...
8—9	9	...	6	...	15	...	...
9—10	4	...	1	...	5	...	...
10—15	4	...	5	...	9	...	...
15—20	5	...	2	...	7	...	...
20—25	19	...	12	...	31	...	...
25—30	6	...	7	...	13	...	...
30—35	1	...	1	...	2	...	...
Totals,	495	36	467	50	962	86	8·9

Five patients died within 24 hours of admission.

TABLE VIII.
WHOOPIING-COUGH.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—1	8	3	9	2	17	5	29·4
1—2	12	6	12	7	24	13	54·1
2—3	14	2	12	2	26	4	15·3
3—4	14	2	14	2	28	4	14·2
4—5	8	3	11	1	19	4	21·0
5—6	7	...	5	...	12	...	...
6—7	5	...	6	...	11	...	...
7—8	1	...	...	...	1	...	...
8—9	1	...	...	...	1	...	...
Totals,	70	16	69	14	139	30	21·6

One patient died within 24 hours of admission.

TABLE IX.
 ERYSIPELAS AND PUERPERAL FEVER.

Age-Periods.	ERYSIPELAS.				PUERPERAL FEVER.	
	Males.		Females.		Cases.	Deaths.
	Cases.	Deaths.	Cases.	Deaths.		
0—5	2	...	1	...	...	...
5—10	1	...	2	...	...	...
10—15	3	...	4	1	...	...
15—20	2	...	7	1	4	1
20—25	7	...	5	...	8	1
25—30	9	1	8	...	10	5
30—35	9	1	4	...	12	5
35—40	11	2	6	...	8	2
40—45	13	2	5	...	3	1
45—50	4	...	7	3	1	1
50—55	6	...	4	1	...	...
55—60	4	1	3	...	...	...
60—65	8	1	3	...	...	...
65—70	2	...	2	1	...	...
70—75	1	...	2	1	...	...
75—80	2	...	1	...	...	...
Totals, -	84	8	64	8	46	16

Three cases of Puerperal Fever and one of Erysipelas died within twenty-four hours of admission.

TABLE X.
UNCLASSIFIED DISEASES.
(a) INFECTIOUS.

	MALES.		FEMALES.	
	Cases.	Deaths.	Cases.	Deaths.
Cerebro-Spinal Meningitis, - -	3	2	2	1
Influenza, - - - - -	3	...	5	...
Febricula, - - - - -	1	...	...	...
Tuberculosis—				
(a) Meningitis, - - -	2	2	1	1
(b) Peritonitis, - - -	...	...	1	...
(c) Of Lungs, - - -	2	1	...	...
Venereal Diseases, - - -	1	...	...	...
German Measles, - - -	3	...	10	...
Varicella, - - - - -	5	...	2	...
Parotitis, - - - - -	1	...	2	...
Dysentery, - - - - -	...	...	1	..
Beri-beri, - - - - -	4	...	...	...
Zymotic Enteritis, - - -	1	1	...	...
Septicæmia, - - - - -	1	1	1	1
Totals, - - - - -	27	7	25	3

One patient died within 24 hours of admission.

TABLE X.—Continued.
UNCLASSIFIED DISEASES.
(b) NON-INFECTIOUS.

	MALES.		FEMALES.	
	Cases.	Deaths.	Cases.	Deaths.
Pneumonia, - - - -	8	...	6	4
Broncho-pneumonia, - - -	6	3	5	4
Pleurisy, - - - -	1	...	...	...
Pericarditis, - - - -	1	...	...	...
Nephritis, - - - -	1	...	1	...
Cystitis, - - - -	2	...	...	...
Diabetes, - - - -	1	...	...	...
Adenitis, - - - -	...	...	1	...
Laryngitis, - - - -	1	...	1	...
Cancrum Oris, - - - -	3	3	...	...
Tonsillitis, - - - -	17	...	17	...
Ulcerative Sore Throat, - -	...	...	2	1
Meningitis, - - - -	1	1	1	1
Rheumatism, - - - -	2	...	1	...
Septic Conditions, - - - -	16	2	9	...
Conjunctivitis, - - - -	2	...	2	...
Erythemata, - - - -	2	...	1	...
Urticaria, - - - -	1	...	...	...
Dermatitis, - - - -	2	1	...	...
Pityriasis, - - - -	3	...	...	...
Lichen, - - - -	1	...	...	...
Drug Rash, - - - -	...	...	1	...
Appendicitis, - - - -	2	...	1	...
Phlebitis, - - - -	...	...	2	...
Carcinoma, - - - -	1	1	...	...
Alcoholism, - - - -	...	...	1	...
Transverse Myelitis, - - -	1	...	...	...
Scabies, - - - -	1	...	2	..
Burn, - - - -	1	...	...	...
Nil, - - - -	15	..	12	...
Nursing Mothers, - - - -	...	...	9	...
Members of Staff with Non- infectious Diseases, - - -	3	...	11	...
Totals, - - - -	95	11	86	10

Two patients died within 24 hours of admission.

TABLE XI.

NUMBER OF PATIENTS ADMITTED SUFFERING FROM
TWO OR MORE DISEASES.

Scarlet Fever and Chickenpox, - - - -	2
Diphtheria and Scarlet Fever, - - - -	3
Measles, Whooping-cough, and Chickenpox, - -	1
Measles, Diphtheria, and Chickenpox, - - -	1
Measles and Whooping-cough, - - - -	3
Measles and Diphtheria, - - - -	1
Measles and Chickenpox, - - - -	10
Chickenpox and Whooping-cough, - - - -	3

TABLE XII.

NUMBER OF PATIENTS ADMITTED INCUBATING A DISEASE
DIFFERENT FROM THAT FOR WHICH THEY WERE ADMITTED.

Disease for which admitted.	DISEASES WHICH DEVELOPED.						
	Measles.	Whooping- cough.	Mumps.	Rötheln.	Chicken- pox.	Diph- theria.	Scarlet Fever.
Measles, - -	...	7	2	1	8	...	1
Scarlatina, -	1	...	1	...	2	1	...
Whooping-cough,	2	...	...	...	...	...	...
Chickenpox, -	2	3	...	...	...	...	...
Diphtheria, -	...	1	...	...	1	...	...
Nil, - - -	2	...	...	...	...	...	...

TABLE XIII.

NUMBER OF PATIENTS INFECTED WITH DISEASES OTHER THAN
THAT PRESENT ON ADMISSION TO HOSPITAL.

Disease for which admitted.	DISEASE ACQUIRED.							
	Measles.	Scarlet Fever.	Whooping- cough.	Mumps.	Rùtheln.	Chicken- pox.	Diphtheria.	Typhus Fever.
Measles, - - - - -	...	3	9	...	...	3	4	...
Scarlet Fever, - - - - -	...	...	...	8	8	12	4	...
Whooping-cough, - - - - -	12	1	...	...	...	3	1	...
Enteric Fever, - - - - -	...	...	...	...	...	1	...	...
Chickenpox, - - - - -	11	1	...	...	...	...	...	...
Diphtheria, - - - - -	...	4	1	...	...	3	...	...
Erysipelas, - - - - -	...	...	...	...	...	...	...	1
Nil, - - - - -	...	...	...	...	...	4	...	...

TABLE XIV.

INFECTIOUS DISEASES AMONG THE STAFF.

	Typhus Fever.	Diph- theria.	Enteric Fever.	Scarlet Fever.	Measles.
Doctor, - - - - -	...	1
Nurses, - - - - -	1	6	1	4	1

APPENDICES.

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APPENDIX A.

Statistics of the Smallpox Hospital, 1905-1906.

TABLE I.—TOTAL NUMBER OF CASES TREATED IN THE SMALLPOX HOSPITAL FROM 1ST JUNE, 1905, TO 31ST MAY, 1906.

	MALES.		FEMALES.		TOTAL.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Variola, - - - -	3	...	...	...	3	...
Chickenpox, - - -	57	3	54	1	111	4
Chickenpox and Measles, -	14	...	12	1	26	1
Chickenpox and Whooping-cough, - - - -	9	2	10	...	19	2
Chickenpox and Scarlet Fever, - - - -	2	...	1	...	3	...
Chickenpox, Measles, and Diphtheria, - - -	1	1	...	...	1	1
Measles, - - - -	3	...	2	...	5	...
Syphilis, - - - -	2	2	...	...	2	2
Septic Rhinitis, - - -	1	1	...	...	1	1
Lichen, - - - -	4	...	2	...	6	...
Impetigo, - - - -	...	...	1	...	1	...
Erythema, - - - -	1	...	...	...	1	...
Scabies, - - - -	2	...	4	..	6	...
Nil, - - - -	...	...	1	...	1	...
Nursing Mothers, - -	...	...	6	...	6	...
Total, - - -	99	9	93	2	192	11

TABLE II.—TOTAL NUMBER OF CASES OF CHICKENPOX TREATED
FROM 1ST JUNE, 1905, TO 31ST MAY, 1906.

Age-Periods.	MALES.		FEMALES.		TOTAL.		Mortality per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
0—1	5	...	9	...	14	...	...
1—2	19	2*	8	1†	27	3	11·1
2—3	10	3‡	8	1§	18	4	22·2
3—4	12	...	6	...	18	...	...
4—5	14	...	8	...	22	...	...
5—6	7	...	11	...	18	...	...
6—7	7	...	9	...	16	...	...
7—8	3	...	5	...	8	...	...
8—9	...	...	5	...	5	...	...
9—10	1	...	3	...	4	...	...
10—15	...	...	1	...	1	...	...
15—20	...	...	2	...	2	...	...
20—25	1	...	1	...	2	...	...
30—35	1	...	...	...	1	...	...
Total,	80	5	76	2	156	7	2·6

* One of these patients died of pulmonary phthisis and the other of whooping-cough with broncho-pneumonia.

† This patient died of pneumonia.

‡ One of these patients died of marasmus, one of sepsis secondary to the varicellar eruption, and the other of whooping-cough with broncho-pneumonia.

§ This patient died of measles.

APPENDIX B.

The following is a list of the donors of toys, books, money, &c., for the patients in the hospital at Christmas and New-Year, 1905-6 :—

Messrs. Blackie & Sons, Ltd., 17 Stanhope Street.
 Miss Hamilton, 11 Prince's Square, Queen's Park.
 Jos. Coats, Esq., Mauchline.
 Mrs. Rottenburg, Holmhurst, Dowanhill Gardens.
 Mrs. Ure, Cairndhu, Helensburgh.
 Mrs. Hamilton, 1 North Park Terrace, Hillhead.
 Miss Waddell, Invereck, Kilmacolm.
 Miss Greenhill, Mooreholm, Kilmacolm.
 Mrs. William Tulloch, 62 Montgomerie Drive, Kelvinside.
 Mrs. William Wothorpspoon, 9 Park Circus.
 Sir Tollemache Sinclair, Bart., 14 King Street, London, S.W.
 Mrs. A. G. Brown, 18 Royal Terrace, W.
 Miss I. D. A. Nish, 9 Claremont Terrace.
 Miss Spier, Newton Farm.
 Dr. William Buchanan, 1 Craigpark Terrace.
 Mrs. Luthrie, 1384 Pollokshaws Road, Upper Shawlands.
 Mrs. Lawrie, 48 Prince's Square, Regent Park.
 The Ministering Children's League, per Mrs. Collins, Highfield House, Kelvinside.
 Mrs. Balfour, Kelvindare, 73 Cambridge Drive.
 Miss Innes, Benvarren, 8 Bruce Road, Pollokshields.
 Mr. & Mrs. Tom Potter, Woodlands, Cambuslang.
 Mr. Neil, 316 St. Vincent Street.
 William Bow, Esq., 61-71 High Street.
 Bailie Steele, 41 Albert Drive.
 Dugald M'Kechie, Esq., 14-16 Candleriggs.
 Messrs. Joseph Johnstone & Boath, 53 Bothwell Street.
 Mrs. Henry Dallachy, 145 Greenhead Terrace.
 Misses MacEwan, 13 Huntly Gardens.
 T. Clement, Esq., Cliff House, 28 Albert Drive, Pollokshields.
 Dalmarnock Road Congregational Church, per Rev. George Hayton, 6 Hillfoot Street.
 Mrs. Findlay, 5 Bute Gardens, Hillhead.
 Victoria Place Baptist Church, per the Rev. John M'Lean, 18 Montgomerie Terrace, Mount Florida.
 Mrs. J. Hay Wilson, 6 Park Circus Place.
 Mrs. Thomas A. Mathieson, 6 Park Circus Place.
 Blythwood Busy Bees, per Mrs. Home Morton, Blythwood Square.
 Claremont Church, per Rev. Adam C. Welch, M.A., B.D., 19 Bute Gardens.
 Sydney Place U.F. Church, per John Inglis, Esq., 8 Firpark Terrace.
 Miss Playfair, 7 Victoria Crescent, Dowanhill.
 Bailie Hugh Alexander, Eastfield, Rutherglen.
 The Hon. Misses Burns, Wemyss House, Wemyss Bay—a basket of flowers weekly during season.
 Miss Stephen, Kelly, Wemyss Bay—a box of flowers weekly during season.
 Proprietors of the *Glasgow Weekly Herald*—6 Copies of the *Weekly Herald* every week.

In addition there were several anonymous donors.



